DENVER PC BOARDWATCH

NEWSLETTER FOR DENVER AREA ELECTRONIC BULLETIN BOARD SYSTEMS

Editor: Jack Rickard | Volume I Issue 5 | July 1987

BITS

WEATHER INFO: Heard any good ones lately? We have. It seems a group here in Colorado has banded together to try to - get this - predict the weather. The National Weather Service provides a recorded summary of their efforts at (303)639-1212. Additionally, the Department of Transportation offers an Automated Flight Service Weather Briefing system at (303)799-7000. A touch tone phone is required to enter menu selections such as 636-Menu, 206-weather, 207-special alerts, 208-pilot weather briefing, 222-hot air balloon briefing, and a score of others. We'd like to see satellite video over the phone or perhaps 100-mile radar.

FCC PROPOSAL: The Federal Communications Commission has proposed assessing charges amounting to nearly $5 hourly on computer telecommunications services offered by such firms as US Sprint, McDonnell Douglas Tymnet, Dow Jones News/Retrieval, Compuserve, and PC Pursuit. These companies are currently exempt from the access charges long distance voice carriers such as AT&T and MCI pay to local telephone companies. The proposal calls for January 1, 1988 end to the current exemption from interstate access charges. If approved, these access charges would presumably be passed on to the consumer. PC Pursuit currently provides long-distance evening data packet service to individuals for a flat fee of $25 monthly. If the new proposal is adopted, they would probably drop such service. The FCC is soliciting comments from interested parties concerning Interstate Access Charge Exemption for Enhanced Service Providers - Docket 87-208. Honorable Dennis Patrick, Chairman Federal Communications Commission, Office of Opinion and Review, 1919 M Street NW, Room 222, Washington, DC 20554; (202)632-7000.

HAYES 9600 MODEM: Hayes Inc. announced a new series of modems including a 9600 Bit Per Second (bps) model. The external 9600 is priced at $1299 while the internal 9600B lists at $1199. Like all 9600 bps modems currently on the market, 9600 bps operation requires 2 identical modems (in this case Hayes). The new V series modems offer error correction, data compression, and automatic rate negotiation to select the fastest available data rate between two modems. In the past Hayes has established the standards that other modems must accomodate. The Hayes AT command set is almost universally emulated. Time will tell if Hayes still has the horsepower to establish a much needed 9600 bps standard. Hayes Microcomputer Products Inc., P.O. Box 105203, Atlanta, GA 30348; (404)441-1617.

COMPUSERVE PRICE CUT: Compuserve Information Service reduced its daytime connect

Copyright 1987 - All rights reserved

charges of $12.50 hourly for 110-450 bps service and $15.00 hourly for 1200-2400 bps service to match evening and weekend rates of $6 per hour and $12.50 per hour respectively. This amounts to a much larger reduction for 300 bps users than for the more numerous 1200 bps users. Still, it simplifies rates allowing the same charges around the clock. Additionally, Compuserve announced a universal Graphics Interchange Format (GIF) purported to allow exchange of graphic files between Apple Macintosh, Atari ST, Commodore Amiga, and IBM PC/XT/AT computers. Compuserve has placed the new GIF protocol in the public domain hoping communication software developers will incorporate the new capability in future releases. Compuserve Inc., 5000 Arlington Centre Blvd., PO Box 20212, Columbus, OH 43220; **(614)457-8600.**

INTEL 80486 MICROPROCESSOR: Intel Corporation has finalized specifications for the next chip in its series of microprocessors, the 80486. The new 32-bit chip, scheduled for availability in 1990, will have some 1.25 million transistors within it compared to approximately 250,000 in the 80386 and 135,000 in the 80286. The new chip is ostensibly capable of 20 Million Instructions Per Second (MIPS), comparable to the IBM Sierra mainframe computer. Intel Corporation, 3065 Bowers Ave., Santa Clara, CA 95052; **(408)496-4580.**

MICROSOFT MAGAZINE: Magazines aimed at the programming segment seem to be a coming trend. Last issue we noted Borland's new **Turbo Technix** magazine. Now we learn Microsoft has started a house periodical as well. The new bi-monthly is titled **Microsoft Systems Journal** and appears to be aimed at software developers. It promises to provide the inside story on the upcoming OS/2 operating system, device drivers, expanded memory, network communications, etc. While Borland is providing free subscriptions to registered owners of its programming languages, Microsoft levies a stiff $34.95 for 6 issues. Still, for those serious about learning the ins and outs of DOS and the new OS/2, this magazine appears to be required reading. Steven Ballmer heads up the project. Microsoft Corporation, 16011 NE 36 Way, Bjox 97017, Redmond, WA 98073; **(206)882-8080.**

HURRICANE HOTLINE: If past years are an indication, we'll likely see five hurricanes destroy property in the U.S. this year. Normally, this is not much of a problem on the front range. For the ever-cautious, the National Oceanic and Atmospheric Administration (NOAA) has activated its Hurricane Hotline at **(900)410-NOAA** to provide a taped update of hurricane activity. The service costs $0.50 for the first minute and $0.35 for each subsequent.

WORST JOKES IN THE WORLD: Amateur commode-ians may have a source for new material. Joke line at **(516)922-9463** features the worst jokes available anywhere at any price. Jackie Martling wrote a lot of material for Rodney Dangerfield. We think Mr. Dangerfield has a bright future anyway.

WHEEL OF FORTUNE PLAYERS: Cryptoanalysts have known for years that each letter of the alphabet is used with unique frequency in English text. By

far the most common in the English language is the letter E. For those enamored of the wheeled word game, the remaining letters of the alphabet occur in the following order of frequency: **TOANIRSHDLUCMPFYWGBVKJXZQ.** Oh Vanna!

NBS TIME SERVICE COMING: Roger Beehler of the National Bureau of Standards (NBS) Time/Frequency Division in Boulder CO brings us a bit of good news. NBS has decided to go ahead with development of an on-line data service providing date and time of day for computer systems. The service would operate much like the US Naval Observatory (USNO) service we described in the May issue of Denver PC Boardwatch. When accessed, the USNO service simply emits an ASCII text string each second containing the date and time of day with an asterisk used as the actual time mark. This time service is tied directly to the USNO master clock - legally the official US time for all Department of Defense activities. Recall from the May issue the brief BASIC program we provided to automatically synchronize the DOS clock to the USNO service. Unfortunately, this technique required a long distance telephone call to Washington D.C. causing two minor difficulties. First - the expense of long distance charges. Second - the delay period from Washington D.C. This varied between 23 and 350ms (milliseconds) depending on whether land lines or satellite links were used - impossible to predict. Although 1/4 second is not going to throw most of us off schedule appreciably, some scientific applications require fairly accurate time coordination.

Within the next 60 days, NBS will initiate a very similar service. For those in the Denver area, the service will be a free local call. It will have a brief and predictable delay period, and it will be tied to the NBS master clock - legally the official time base for all civilian activity in the US. We'll post the number, time delay, and a short program in a future issue when NBS plans firm up.

CORE HARD DRIVE: If you need a fast, high-capacity hard disk drive designed to last forever and you're prepared to pay for it, we may have found an item of interest. Core International is currently shipping their model HC40 40MB hard drive featuring an average access time of 9.5ms. This pushes voice-coil technology pretty much to the limit since it requires 8.36ms for the disk platters to make a single rotation at current speeds. Most of the newer voice-coil drives available with AT class machines feature a 28ms access time. By comparison, the Core units' 9.5ms rating looks quite quick. The unit features hard-plated media allowing a 3 year warranty and a Mean Time Between Failure (MTBF) rating of 33,000 hours. Additionally, Core provides telephone technical support for the full 3 years. And, at the end of the warranty period, you can trade in your drive and receive a 50% original price credit toward a new drive. Drawback? Core is wildly proud of this unit at $2995 for the drive and an additional $595 for a required controller card. Ken Tarver at extension 220 seems quite knowledgeable. Core International, 7171 North Federal Highway, Boca Raton, FL 33431; (305)997-6055.

LOCAL SERVICE

FIDO NEWS: Adam Hudson has changed the name of his board again - this time to **QBBS Central** - still node 24 at **(303)423-3114.** The board now serves as a test bed and support service for his new bulletin board software - QBBS. If you are interested in setting up a BBS, you might want to check this out. The board is very easy to use and quite fast. Rumor has it the price is right too.

Phil Becker brings up **TBBS Net (303)699-9248** this month as node 23. TBBS stands for The Bread Board System and **TBBS Net** is home board for this BBS software. The software sports a $295 price tag and is distributed by eSoft Inc. The board carries a fairly extensive backlog of Fidonet technical discussion messages.

COMMODORE MEGABOARD: Comm-net computer store sells and services Commodore computer products. They also run a BBS on four Commodore C-64 computers, each with a separate line. Oddly, the four units are all multiplexed to a single XEBEC 20 Megabyte hard drive that's just loaded with goodies for Commodore enthusiasts. The system works so well, users on all four lines could theoretically access the same file simultaneously. The bad news is the $60 "membership fee" required to access many of the more productive file areas. The good news is you can logon to any of the four numbers and shop around a bit. Even better, Comm-net sells the Commodore compatible XEBEC drive for $849. If you're out there trying to run a BBS on a Commodore with a 160 Kbyte 1541 drive, you may want to check with these people. **(303)366-7177.**

CONTROL POINT: John Maxwell has had **Control Point** up for several months now at **(303)526-9642.** He's tried Fido, Opus, TBBS, QBBS, and DBSystems software and now appears to be going for a combination of 3-5 of these titles simultaneously. Whatever software he finally settles on will be fine with us. His board sports some outstanding menu design work. For the brief time he's been up, John has amassed a staggering amount of up-to-date, quality, download software. We almost hesitate to publicize this board since up to now its been one of the best kept secrets in town and a valuable source of public domain/shareware type PC software. As of this writing, the board is easy to get on (few busy signals) and provides as extensive a software library as there is in the area - bar none. Hold 30 minutes open for us...will you John?

LOCAL REAL ESTATE BBS: A new Property Owners Marketing System BBS has opened up at **(303)973-0100.** The new board is quite restrictive with a 10 minute initial period. Worse, you can hardly tell its purpose from the menu items available. A mere $50 will get you a months access to what they promise is a very extensive listing of homes for sale by owner. Given the restrictive requirements to view these properties, we're hardly tempted to list one on this system. Fascinating idea - poorly executed. Save your dime.

DEC RAINBOW USERS: If you use a Digital Equipment Corporation Rainbow computer, you may be feeling a little left out in the cold. Locally, a Denver Rainbow Users Group is operating in support of DEC owners. The **Career Connection/DRUG** (Denver

Rainbow Users Group) BBS is available at **(303)671-0801** from 7 PM to 7 AM. The DRUG group publishes a small but informative newsletter as well listing a number of national BBS devoted to DEC computer enthusiasts. Denver Rainbow Users Group, 2993 S. Peoria, Suite 390, Aurora, CO 80014-3179; **(303)671-0800.**

HARD DISK DRIVE DEAL: John Holmgren claims **Computer Know How BBS (303)279-0224** has been up for nearly five years. We just located the board recently and it proves quite interesting. The BBS runs on a Kaypro 10 with ZBYE software but sports a wealth of MS-DOS utilities. More importantly, "John of the Rockies" as he's known locally, offers some enormously attractive deals on hard disk drives. Notably, he is selling an 85 MB (67 formatted) Miniscribe 5 1/4 inch unit for $850 installed. The deal includes some disk management software that divides the big unit into multiple virtual drives. He also has a 380 MB Maxtor unit for $1400 with 760 MB drives available in the near future. Even if you're not in the market right now, Mr. Holmgren seems quite knowledgeable on the subject of hard disk technology and quite happy to answer questions.

PROFESSIONAL SYSTEM: The **Professional System** BBS has been on a two month sabbatical due to hard drive difficulties. This month, **Professional System** returns to full operation at **(303)740-2223** running TBBS software. The board is affiliated with the Electronic Data Processing Auditors Association. More importantly, it features areas for lawyers and writers with software, text files, and messages for each group. Additionally, The Professional System supports a Great Books literary discussion group. Welcome back sysop Bob Voorhees.

LONG DISTANCE

LEGAL SOFTWARE BBS: Barristers might have an interest in the **Legal Software BBS** at **(212)409-4194.** This New York City BBS offers a large selection of public domain legal software in BASIC for download. The programs are designed to assist lawyers in the preparation of wills, divorce actions, garnishment, summons and complaint, restraining notices, etc. Ed Wolf is sysop. He has figured out some scam involving another BBS, **The Invention Factory** at **(212)431-1254**, to lawyer you out of $250 for a package of support services and software. Perry Mason never had it so good.

REAL ESTATE BBS: If you're moving to Washington DC soon, you may want to check out the **Capitol Area Real Estate Exchange BBS** at **(703)620-2916** before you go. Sysop Bill White offers a lot of info to real estate professionals as well.

ON-LINE STORE: **The On-Line Store BBS (805)656-0379** offers a wide variety of hardware and software for sale. Items can be ordered using Mastercard or Visa and shipped UPS. This month, the BBS offers the US Robotics 2400 bps internal modem for $179 plus $8 UPS ground or $14 for 2 day air freight. That's as good a price as we've seen anywhere. The store also offers a CTS Datacom 2400 bps external model for $239. Other items offered include typesetting services, monitors, video cards, hard drives, and motherboards. The

board is notably well designed and absent the usual naked greed so prevalent in this type of BBS/commercial store. Sysop Stan Snyder offers a 15 day full refund policy.

NEC APC SUPPORT: If you're running a Nippon Electric Corporation (NEC) PC, you may be searching for support in an IBM world. Help is on the way. NEC Home Electronics (USA), Inc. maintains a **Personal Computer Technical Support BBS** at **(800)632-7227.** Anagram **800-NEC-RBBS.** The BBS provides some excellent technical advice on NEC computers. Although the board requires a mail-in registration, you can dial up and look around. The 800 number is free, and the sysop seems to know a bit about NEC computers. NECC Home Electronics (USA), Inc., 1255 Michael Dr., Wood Dale, IL 60191-1094.

PURDUE UNIVERSITY BBS: Purdue University of West Lafayette Indianna sponsors an **Agricultural Bulletin Board System (ABBS).** This board operates at **(317)494-6643** providing a wealth of agricultural information. The initial screen provides a shortcut method of locating sources for Indianna hay. We assume this has something to do with the drought last year when hay in much of the country was in short supply. The board is operated by Purdue's Cooperative Extension Service. In addition to agricultural info, the BBS provides access to the Fast **Agricultural Communications Terminal System (FACTS).** This is actually an Indianna state-wide system of microcomputer terminals tied to a University computer. The system runs some agricultural "expert systems" software. Users enter data concerning specific agricultural problems and the system makes informed recommendations. The board is a gold-mine of information on farming and horticulture. Highly recommended.

PC-TECH JOURNAL: PC-Tech Journal magazine operates a BBS at **(301)740-8383.** This is in keeping with the current trend toward computer magazine operated BBS such as Byte Magazines BIX service and PC Magazines Reader access service. The PC-Tech Journal board provides download files for every listing that appeared in their publication. These programs and articles cater to the technically oriented user and serious programmer, much as the magazine does.

ON-LINE NEWS SERVICE: Conservative Digest has long offered news services with a conservative view quite different from the liberal slant offered by most national media. Now they have sponsored the American Press International on-line news service. By purchasing a $25 software package, you can download approximately 17-18 pages daily of world news compiled by Conservative Digest for a simple access fee of $1 at 2400 bps or $2 at 1200 bps. The daily package provides business news, reports on Congress, the White House, and the courts, and top news stories of the day. The software allows the packet to be downloaded in minimum time to read later at your leisure. Bruce Martindale, American Press International, Box 2246, Fort Collins, CO 80522; **(800)356-7111.**

SHAREWARE

PROCOMM 3.0: There has been some recent message traffic on local BBS concerning a version 3.0 release of the popular

ProComm communications package. As of this writing - **NO SUCH VERSION** has been released. Datastorm Technologies of Columbia Missouri confirms version 2.4.2 as the latest release. Datastorm Technologies, PO Box 1471, Columbia, MO 65205; **(314)449-9401.**

GT POWERCOMM 12.21 P&M Software of Houston TX has supported their popular communications software with a flurry of releases. Last issue, we reported on version 12.20. Paul Meines of P&M software noted then that the additional features rated a move to 13.0 but he thought 12 was a high enough number. They're at it again. As of June 6, P&M released version 12.21. According to the accompanying documentation, few new features were added but numerous bugs from 12.20 were fixed. GT Powercomm is noted for its large dialing directory capacity (999 entries) and more recently for the large variety of file transfer protocols provided. P&M Software, 9530 Country Creek, Houston, TX 77036; **(713)772-2090** (data). The latest release can be downloaded locally from **THE 8TH SEA** at **(303)252-9235.**

ARC521.COM: System Enhancement Associates has released version 5.21 of its famous archive utility. The program allows compression and storage of files in single archive files. This latest release adds a feature to display a stowage factor each time a file is added to an archive. The stowage factor indicates the amount of space saved by archiving the file. Some minor encryption bugs were fixed as well. Nothing dramatic involved in this release. System Enhancement Associates Inc., 21 New Street, Wayne, NJ 07470; **(201)694-3348.**

PC-LOCK: Johnson Computer Systems brings us a truly useful utility in PC-LOCK version 1.0. This program combines a much needed measure of security for hard disk drive users with an elegantly simple and easy to use installation procedure.

In concept, the program is quite simple - password protection for all hard disk-based data. After installation, any time you boot your computer from hard disk, you will be asked for a password. Until you provide it, the computer will not boot. If you boot from floppy, you still cannot access the hard disk. No combination of re-boots, hard switch resets, etc. seem to defeat this program.

Installation too is impressively simple. The program comes in an archived file when downloaded from a BBS. Unarchive the file and transfer all resulting files to a formatted diskette in the A drive. Enter A:INSTALL and press the RETURN key. The program installs its driver and alters your CONFIG file automatically in seconds. Thereafter, anytime the system is booted up, the password will be required. The floppy itself is then required to DEINSTALL the program from your system so be sure and retain it.

Changing the password is also simple. The program comes configured with the password PASSWORD. To change it, enter PASSWORD and press RETURN. You will be asked for the old password (in this case PASSWORD). The program will then ask for the new password. Your password may consist of up to 40 keystrokes and all keys on the keyboard are recognized. Finally, you'll be asked to re-enter your new password to confirm.

A feature we found most endearing was the screen blank function. By pressing the left shift key three times in succession, you cause the screen to blank and the keyboard to go completely dead. No keystrokes will be read including the CTRL/ALT/DEL reboot combination, ESC, or CTRL/BREAK. To reactivate the keyboard and screen, simply enter your password and press RETURN. Note that this function can be invoked from any application and although the keyboard and screen go dead, the application continues to run. This could be most welcome in a corporate environment. If you had a lengthy database sort/search to run, simply start the process, press left shift three times and go to lunch. Not only would the program grind away while you're sipping Bombay Gin and Tonic, but your program, data, and even your screen displays are safe from the prying eyes and busy fingers so prevalent in those environs. This feature is equally welcome in homes with small children who like to "play computer" while you're checking on the garden hose they turned on in the basement window well.

In general, we found PC-LOCK quite useful and so easy to use that the documentation runs less than 6 pages even with the usual shareware license agreement and its attendant threats on the fate of our immortal soul. The license fee is but $17.50 at that with multicopy discounts available. This program is a must for hard disk users dealing with even slightly sensitive information and its useful for nearly everyone. Johnson Computer Systems, 20 Dinwiddie Place, Newport News, VA 23602. Available locally for download from This End Up Fido (303)430-1585.

QMODEM SST V3.0

Review by Alan Applegate

Qmodem has enjoyed a long life as a shareware program, re-energized by new releases periodically to keep it from dying. If you assume from the new title suffix (SST) that it got a double-dose of adrenalin this time around, think again. "SST" makes me think of fast, which Qmodem has never been and doesn't seem to be in this April 18 release of version 3.0. The program gets the job done however, and lightning-fast program execution speed usually comes at a price.

In this incarnation, Qmodem sports a fancy new status line. Not being a fan of status lines myself, I found this to be a very annoying new feature. Status line enthusiasts, however, will be thrilled at the wealth of information available there: emulation, on-line status, settings (baud rate, bits, etc.), backspace mode, high bit stripping status, echo status, buffer status, etc. I would have been quite happy having all of these features available on the help screen instead.

When I first sorted through the Qmodem SST documentation, I was fascinated by the implementation of so-called "external" file transfer protocols. The major protocols (Xmodem, Xmodem CRC, Relaxed Xmodem, Ymodem and ASCII) are built-in; that is they are hard-coded inside Qmodem itself. The external protocols include SEAlink, Batch Ymodem, Zmodem, Super Kermit and WXmodem. Rather than being hard-coded, the external protocols are actually separately coded programs, accessed via separate batch files. In theory, this sounds great, and would appear to solve the problem of "keeping up with

the Joneses" by simply adding the latest transfer protocol. In practice, it's not as wonderful as it sounds.

Because the external protocols are separate programs written by others, the screen writes and user interfaces can be, and are, different from each other and from Qmodem. The interface is messy, and in my testing, took some effort to set-up and run correctly. In addition, these programs take up space. In order to employ them all, a hard disk is a prerequisite.

On the subject of disk space, I cannot help but assume that Qmodem SST could have been more thoughtfully written. Qinstall, the configuration program for Qmodem, is separate from the main program, which is somewhat of an inconvenience. Both Qinstall and Qmodem are large, 108,938 bytes for the former and associated files, 274,435 bytes for the latter. The external protocols total 169,155 bytes, a combined overall total of 552,528 bytes; over half a megabyte! Compare these figures to Telix, which totals 164,878 bytes with ALL its associated files. The real puzzle here is that despite its' size, there is almost nothing Qmodem SST does that Telix doesn't do.

One definite "plus" with Qmodem SST is the scripting language. In fact, Qmodem SST's host mode is actually a series of scripts. The script language is very complete, and should allow for almost any possibility. Scripts may be associated with individual macro keys for ease of execution.

A strong disappointment with Qmodem SST is the scroll-back buffer. The default memory setting is sufficient for only 36 lines, not nearly enough to make a scroll-back feature even worth having. The amount of memory devoted to this function can be changed through trial and error with the Qinstall program, but I much prefer memory allocation tasks to be handled automatically.

Five stars go to Qmodem SST for its dialing directory. This one has all of my "dream features." A unique password can be tied to each entry for later macro recall, the last date you connected with an entry is listed, as well as the number of times you have made connection. You can tie a script to each entry, as well as assigning a default transfer protocol. This directory is one of the prime assets of Qmodem SST.

The dial/redial window is also excellent. Although the queue has a maximum capacity of only 10 entries, the display is attractive. It features full name and number information for each entry in the series in a vertical format, and the entry currently dialing is shown highlighted in a different color.

The documentation for Qmodem SST shows some indications that its preparation was hurried. Overall it is well written and well layed-out, but some sections appear to have been left over from previous software releases, and it suffers as a whole from lack of an index.

"Mainframers" will be happy with Qmodem SST. It has emulation of both Digital Equipment's VT-100, and Tele-Video's TVI-925. Other terminal types include "ANSI graphics," as well as a "plain Jane" TTY.

Overall, I find Qmodem SST to be much like any other communications program of its' genre. Telix, Qmodem, and Procomm have always had similar user interfaces, features, and commands. The implementation is

where the primary differences lie. Qmodem is pretty much ordinary; nothing really "stands out" against the competition, the dialing directory and dialing window being possible exceptions.

This isn't a "power users" program. Qmodem SST, although a vast improvement over previous versions, is still in need of some work. As it stands, Qmodem SST doesn't suit my needs as well as Telix, and is not in my opinion as good a program.

[Editor's note: Alan Applegate is the system operator for Entertainment Line Fido 104/36 at (303)969-9510 and a frequent contributor to Denver PC Boardwatch. He recently added a Turbo Basic message area to his BBS.]

FIDO NET

by Steve Carnes

When you first log on to a Fido system, it seems pretty much like any other BBS. What really sets it apart is its' message area. FidoNet is the worlds first amateur electronic mail network.

FidoNet was developed in the early 80's by Tom Jennings in San Fransico. It originated as a means of sending messages from one BBS to another without actually calling that system and manually entering the message. Just enter your message on one board, and tell it which board you want it sent to.

Sending messages back and forth between boards is done during national mail time. Every night at 2:00 AM Mountain Standard Time, all the Fido's shut down to human callers. They will then pack up all their outgoing mail and call each board that has messages addressed to it. Your message will be waiting in the morning to be read by its receiver.

To understand how this works you need to know how the network is structured. A good place to begin is with the individual board, termed a node by sysops. Each node has a unique address. A node list of all the boards contained in the network is maintained by each system. The node number serves as an index for Fido to look up phone numbers. To send a message to a friend on another board, simply enter the node number of the destination board. When mail time comes around at 2:00 AM, Fido uses the node number to look up the phone number and calls the receiving system to transmit the message.

This worked fine until about Sept of '84. FidoNet had grown to over 50 nodes. That's when nets came into existence. Groups of nodes in a local area were organized into nets, with one of the nodes serving as host for that net. Net 104 covers the Denver Area with Oscar Barlow at 104/56 (net 104 - node 56) serving as our host.

If a message is addressed to a node outside the local net, it is sent to the host of that net. The host will then forward the message to the receiving node. This helps to alleviate some of the traffic.

Today there are over 1800 nodes world wide organized into over 400 nets. They can be found in Europe, Asia and even Down Under in Australia. Updates to the node list are collected and published every Friday by the International Fidonet Association BBS net 1 node 0 in St Louis Mo (314)352-9985. The updates are distributed through the network and processed by all the individual nodes. This list is also available to users for downloading on most systems.

A relatively new addition to FidoNet is a feature called

EchoMail. EchoMail is a way of utilizing NetMail to tie message areas on a single subject from several different boards together to act as one entity - termed a conference. A good example of EchoMail in action is the National Technical Conference. All the boards participating in this are linked together like a long chain. If you enter a message on one board, it will be sent to the next board on the chain during the next mail period. The message will be continued to be ECHOED down the line until, after a few days, your message is on boards world-wide. The increase in the number people reading your message is immense.

The network has become a vast resource of information for people with a wide range of interests. There are EchoMail Conferences on numerous topics. Everything from AIDS, to your favorite software and even one for Vietnam Veterans.

Fido has a lot to offer users. The only costs involved are for the long distance phone calls. Since a one page message only takes about 30 seconds to transmit, a call to New York at 2:00 AM only costs about 20 cents. All EchoMail Conferences are free to users and a variety of information passes through the net each day. Come on and give us a call! Let's communicate!

[Editors Note: Steve Carnes is sysop of **This End Up Fido 104/30** at **(303)430-1585** operating 10 PM to 10 AM daily.]

EDITORS NOTES

This month, Denver PC Boardwatch brings you a verified list of 218 local bulletin board systems/services. The summer doldrums seem to have hit the BBS community. A total of 19 boards came up missing in action this month and we sport a net gain of 1 BBS from our June issue. We present the list in a slightly improved format. Subscriptions have slackened somewhat and preliminary reports indicate a number of users are involved in a massacre of crappie, bass, and trout.

In early June the FCC announced its intention to eliminate the exemption from local access charges currently enjoyed by the packet data services. In doing so, they have lumped a unique group of electronic data service pioneers in with the long distance operators classed as common carriers. If they pursue this tact, large businesses using $100 per-hour databases will hardly be affected by a few dollars more. Low budget operators and amateurs using such services as PC Pursuit, Compuserve, and Genie will largely suffer the same fate as the crappie, bass, and trout.

Although the FCC is soliciting comments, they are soliciting them from specific users, i.e, the Bell operating companies and various long distance carriers. They will graciously receive general public comment later in the summer. Fortunately, the US Postal service has been most uncooperative and has insisted on delivering mail from common citizens. Feel free to write to the FCC at the address provided in our front page item. But keep in mind that the FCC is a bureaucracy - none are elected nor for the most part even lucid. Still, as our system operates, those who yowl loudest tend to prevail. We urge you to yowl...

Jack Rickard
Editor

DENVER PC BOARDWATCH

LIST OF ELECTRONIC BULLETIN BOARD SYSTEMS

TITLE	TELEPHONE	BPS	HOURS	DESCRIPTION	TYPE
Aces High	329-6579	3/12	24	Programming/General Messages	Franklin
Alcatraz	467-2877	3	5P-10A	Commodore	C-64
Alpha BBS/ Intercomex	367-1935	3/12/24	24	Tandy/Ham Radio/Space Topics	TRS
AmNet On-line	1-223-1297	3/12	24	Animal Rights Issues	IBM
Apparat Inc.	790-7947	3/12/24	24	IBM Fido board	IBM
Apple Pi Board	422-3716	3/12	24	Apple User Group Messages/Downloads	Apple
APSNet	693-6737	3/12	24	Aurora Public Schools Network	Apple
Atlantis	973-0369	3/12/24	24	Apple, MAC, Message	Apple
Aurora Net	680-9292	3/12/24	24	Protree Prime/Elite Support Board	Apple
Aurthur's Den	680-1724	3	??	Commodore	C-64
Back Door BBS, The	690-0194	3/12/24	24	Games	Apple
Backstage BBS	690-2018	3/12/24	24	INFO NEEDED	??
Baha'i Board	449-3306	3/12/24	24	Religious/Philosophy/Baha'i faith	IBM
Bank, The	771-7531	3/12	24	Not Accepting New Accounts	Apple
Blue Planet	979-7299	3	24	Space Wars Game	Tandy200(
Boulder Fido 104/77	497-6968	3/12/24	24	Messages and Downloads	IBM
Boulder MAC Maniacs	666-7543	3/12	24	MAC Messages	Apple
Box's Cabin, The	424-9185	3/12	24	Apple/Technical Notes	Apple
Buck Board, The	427-9539	3/12	24	Veterans messages, TRS-80, Amiga	TRS
Bud's BBS	761-6807	3/12	24	Atari - 3.123 Megs - News items	Atari
C.A.R.L Boulder/Broomfield	444-2057	3/12	24	Library Research	Tandem
C.A.R.L Colorado Springs	1-632-2194	3/12	24	Penrose Library	??
C.A.R.L. Denver	830-1548	3/12	24	Colorado Alliance of Research Libraries	Mainframe
C.A.R.L. Denver	830-1165	3	24	Colorado Alliance of Research Libraries	Mainframe
C.A.R.L. Denver	830-1547	3/12	24	Colorado Alliance of Research Libraries	Mainframe
C.A.R.L. Denver	830-0519	24	24	Colorado Alliance of Research Libraries	Mainframe
C.A.R.L. Denver	830-1546	3/12	24	Colorado Alliance of Research Libraries	Mainframe
Cable Net Opus	595-0003	3/12	24	New Board!	IBM
Career Connection/DRUG	671-0801	3 to 96	7P-7A	Job List/Resume/Denver Rainbow Users Grp	DEC100
Castle Darkhorn	220-1588	3/12	24	Role Playing Games	??
Catspaw SNOBOL4/ICON 15/22	1-539-4830	3/12/24	24	SNOBOL/ICON Programming Languages	IBM
Chariot	1-632-4111	3/12	24	Subscriber Only BBS Unix	IBM
Chariot	1-632-3391	3/12	24	Public Access Version Unix/Graphics	IBM
Cherry Hills Village Post BBS	762-1981	3/12	24	Cherry Hills Village Elementary School	??
Cheyenne Wells Shool District	1-767-5533	3/12	3P-8A	High School BBS	??
Chip's Ahoy AR TAC	693-2452	3	24	For Apple with ASCII Express Only	Apple
Christian Protocol	745-1504	3/12/24	24	Christian Messages/Bible Text	Epson
Club House, The	756-9134	3/12	24	RP Games/Golf Format/Messages	Apple
Club Micro Max Fido 104/88	832-5850	3/12	24	INFO NEEDED	IBM
Coco County Airport	343-6707	3/12	24	TRS Color Computer Support	CoCo
Colorado Commodore Club BBS	452-0544	3/12	24	Commodore Info	C-64
Colorado FireNet Fido 128/16	1-591-7415	3/12	??	Colorado Springs	??
Colorado Sno-Bank	671-7669	3/12/24	24	Ski Conditions, Roads, Winter Rec Info	IBM
Colorado University	447-2540	3/12	24	University Mainframes (Require Access)	Mainframe
Comm-Net Information Service	340-2473	3/12	24	* These Four Lines All Access the Same *	C-64
Comm-Net Information Service	366-2341	3/12	24	* Excellent Info for Commodore Products*	C-64
Comm-Net Information Service	366-3898	3/12	24	* Service Jokes/Weather/Sports/Datbase *	C-64
Comm-Net Information Service	366-7177	3/12	24	* C-64/C-128/Amiga Info-Dnlds-Messages *	C-64
Comm-Post, The	534-4646	3/12/24	24	Astronomy, TI-PC, Tandy 1000/2000, Jokes	IBM
Compurado Node 1	1-593-1072	3/12/24	??	MS-DOS/CP/M	??
Compurado Node 2	1-591-9448	3/12/24	24	MS-DOS/CP/M	??
Computer Farm	1-632-0669	3/12/24	24	IBM Hardware/Software Sales	IBM
Computer Know How	279-0224	3/12	24	Hard drive installations/technical supp	CP/M
Computer Palace	1-544-4432	3	7P-10A	Pueblo - Commodore / TI / Atari Software	C-64
Computer Repeats Inc.	939-8174	3/12	24	Used Atari Equipment Sales	Atari

DENVER PC BOARDWATCH

LIST OF ELECTRONIC BULLETIN BOARD SYSTEMS

TITLE	TELEPHONE	BPS	HOURS	DESCRIPTION	TYPE
Computers Unlimited	762-9122	3/12	24	Sanyo MBC-55X Support	IBM
Computerworks	665-0709	3/12	24	Macintosh/IBM PC Info Exchange	MAC
Control Headquarters	1-472-0902	3	24	INFO NEEDED	??
Control Point Fido 104/711	526-9642	3/12/24	24	*Excellent* PC Software Download Files	IBM
Control Systems Premier	458-6248	12/24	24	IBM/Compatibles Subscription Board	IBM
Controller Board/TBBS Island	690-9423	3/12	24	Computer Supplies	TRS
COSUG	1-531-9674	3	24	Colorado Springs PC Users Group	IBM
Council of Whitestone	699-0326	3/12	24	D&D Role Games - Jokes	IBM
CP/M SIG INC Fido 104/372	465-1313	3/12	24	Oldest User's Group in Area - CP/M - IBM	IBM
CPU Board	1-772-7229	3/12/24	24	Downloads and Useful BBS Info Since '83	TRS
Crossroads	989-8397	3/12	24	Discussion	TRS
CS BBS Service I	1-531-6668	3/12	24	Subscriber Access Fido 128/11 Zenith	IBM
Custom HUB	1-598-4500	3/12/24	24	Colorado Springs HUB	IBM
Data Bank	494-0167	3/12/24	24	IBM Messages - Good Utilities	IBM
Day's End Fido 104/20	650-5636	3/12/24	24	Downloads, Messages, Astronomy	IBM
DBSYSTEM Beta Test BBS	893-5717	3/12	24	New BBS Software - Comm. Radio Survey	IBM
Death Star, The	781-6863	3/12	8P-6A	Fun Posting	C-64
DEKBBS	1-635-3732	3/12	24	INFO NEEDED	??
Dementia	989-8470	3/12	24	American MENSA Denver Chapter BBS	Apple
Den HUG	331-0982	3/12	24	Denver Heath/Zenith User Group	Heath
Denver Deaf-Net	989-9245	3/12	24	Hearing Impaired / Computing	Apple
Denver Metroplex Fido 104/69	455-3283	3/12/24	24	Autocad/Computer/Sexual Boards	Kaypro
Denver Mile High Mac Meet	758-9159	3 to 96	24	Macintosh Users Group	IBM
Dialamatch 118/The Brokerage	796-9721	3/12	24	Adult Matchmaking	Franklin
Dilligaf	1-593-2232	3	24	INFO NEEDED	??
Dinosaur Board	1-652-3595	3/12	24	Specializing in Outdated Computers TRS	TRS
Discovery, The	388-5437	3/12	24	Music/General	Apple
DJ	789-0500	3	24	Galactic Conquest Game On-line	Apple
Dragon's Shadow	841-3721	3	24	Fantasy	??
Eagles Nest Fido 128/18	1-598-8413	3/12	24	Eagleview Middle School	IBM
Education 2000 Fido 104/29	499-6320	3/12	24	Education Issues K-12	??
Electronic Gathering	1-599-5366	3/12	24	Magic	??
Electronic Locksmith RCP/M	698-1623	3/12/24	24	50M Downloads (CP/M & MS-DOS)	CP/M
Elkridge West	1-488-2671	3/12/24	24	INFO NEEDED	??
Enterprise	860-1323	3/12	24	Commodore board with 3.6 Meg	C-64
Entertainment Line Fido 104/36	969-9510	3/12	24	Movie, Video, Music Reviews/Ranking	IBM
Epoch 2000	1-531-6172	3/12	24	Astronomy	??
ETA Denver Fido 104/32	750-5042	3/12	24	ANSI, Messages, Weather Forecast, Dnlds	Tandy
Eusebeia Fido 104/18	430-8376	3/12/24	24	Christian BBS - Full KJV Bible Downloads	IBM
Excalibur	1-597-0657	3	??	INFO NEEDED	??
Excelcier	697-1244	3/12	24	Apple/Commodore Message Areas	Apple
Experience Software	798-0792	3	24	Franklin Messages	Franklin
Fantasy Mountain	278-8369	3/12	24	Art/Downloads	CP/M
Father's Network	693-6818	3/12	10P-8A	Father's Rights in Divorce Issues	Kaypro286
Fiddler's Fido 104/606	674-1859	3/12/24	24	IBM Equestrian	IBM
Fido NBS 104/607	497-3934	3/12/24	24	National Bureau Standards - Jobs SIG	IBM
Fishery, The	756-3813	3/12	24	Atari/Macintosh	Atari
Galafrea	987-0161	3/12	24	C-64 Downloads/Messages	C-64
GateKeeper, The	755-4210	3/12	24	Gateway High School BBS	Apple
Gay Community Fido 104/19	795-1215	3/12	24	Messages/Downloads for Gays	IBM
Genesis	423-8203	3/12	24	Commodore	C-64
Genesis Project	287-8267	3/12/24	24	Apple II General	Apple
GLOBAL Information	286-7914	3/12	24	Fee Subscription/Software Database	??
Greeley-Com-Net	1-351-8861	3/12/24	24	Micro Store Support Board	Apple
Greenline	469-2053	3/12	24	Amiga	Amiga

DENVER PC BOARDWATCH

LIST OF ELECTRONIC BULLETIN BOARD SYSTEMS

TITLE	TELEPHONE	BPS	HOURS	DESCRIPTION	TYPE
Greeter Hub	1-473-3837	3/12	24	Discussions	IBM
Grizzly King	666-0824	3/12	24	Freeware/Colorado Outdoors/Programmers	IBM
Grotto, The	694-9050	3/12/24	24	Amiga, Pascal	IBM
Hack Shack	688-8406	3/12	24	Commodore	C-64
Hangmans Noose	499-4818	3/12	24	Commodore Games	C-64
HIP Shack	1-593-0766	3/12	24	Southern CO Fido 128/19 HAM/SWL	IBM
Hobbitt Inn	237-5289	-0-	-0-	-0-	-0-
HP-BBS Fido 104/34	1-229-9719	3/12	24	Jokes, Amazing but True stories,	HP-Vectra
In To The Night Fido 104/31	659-1897	3/12	9P-3A	General Fido Messages/IBM Game Files	IBM
Insight	573-2071	3/12	5P-7A	Downloads, On-line Games	??
Investors BBS Service	1-481-4525	3/12	24	Stocks and Investments	IBM
King's Market Bookshop	665-6091	3/12	24	Books, Writers, Timex SIG, Zork	TRS
Kings Bench Fido 104/615	377-6725	3/12/24	24	Tandy 1000 ONLY/$2 Registration/Messages	TANDY10
L&L Support	420-3568	3/12/24	24	Primary GBBS Pro Software Support BBS	Apple
Lakewood Department of Safety	987-7388	3/12	24	Police Sponsored - Law Enforcement Mags	IBM
Lakewood RCPM/RBBS	985-1108	3/12	24	CP/M MS DOS Downloads	CP/M
Land of Lindon	987-2094	3/12	24	Fantasy Runequest Games	Apple
LBS-COM-NET	233-5824	3/12	24	Leaky College Communications Network	Apple
Libyan Embassy	688-1127	3/12	24	Atari Games	Atari
Loading Zone, The	421-3830	3	24	Latest Mods - Subboards - Games	C-64
Magic	791-8732	3/12	24	Macintosh/Apple GS Software & Support	MAC
Manville Information Services	978-3946	3/12	24	Business Software/Macintosh	IBM
mbbSYS! Fido 104/22	443-9155	3/12	24	Writers Tools/Science Fiction	IBM
MED - Link Fido 104/444	443-4353	3/12	24	Medical Info / TI 99/4A / MS-DOS	IBM
Metro Computer Exchange	753-6677	3/12	24	IBM - C64 Messages and Downloads	IBM
Metro Data Exchange	830-2445	3	24	Commodore 64 - Grateful Dead Schedule	C-64
Micro-1040	289-2061	3	24	Private BBS for Software Support	TRS
Microlink B Fido 104/108	972-4181	3/12/24	24	Fido Board - Good Downloads	IBM
Mile Hi Forem	431-1404	3/12	24	Atari Support	Atari
Mile Hi Tech Fidonet 104/56	973-9338	3/12/24	24	Fido Area Coordinator - Fido News/List	IBM
Mile High CUSSNet Fido 104/614	698-9924	3/12	24	CUSS Computer Use in Social Services	IBM
Mile High Epson User Group BBS	752-2943	3/12/24	24	MHEUG Club Board	EPSON
Mile High Net	671-7308	3/12/24	24	Fido Board	IBM
Mile High Software Exchange	730-2250	3/12/24	24	Amiga/Apple Downloads - Messages	Apple
Minds of Mines (MOM) BBS	273-3989	3/12/24	24	CSM Artificial Intelligence/Geotechnical	TI
Mountain Amiga Enthusiasts	1-564-0618	3/12	24	Pueblo Amiga Computer BBS	Amiga
Musician's Den Fido 104/17	321-6857	3/12	7P-9A	Music interests -24 hours on Sunday	IBM
Mycroft	777-8898	3/12	??	INFO NEEDED	??
National Park Svc Fido 104/608	236-9860	3/12	24	Operations Engineering WASO 610	IBM
Networks Unlimited	296-3210	3/12/24	24	Messages/Downloads/Polls	IBM
Neutral Zone	985-9184	3/12/24	24	Amiga Software and Support	IBM
Night Shift, The	322-1544	3/12	24	Casino, Football	Apple
Odyssey III	691-0169	3/12	5P-8A	Adult(18) / Sex Oriented - Members Only	Apple
Optotech Inc	1-570-7973	12	24	400 Meg Optical Disk Drive	IBM
PACE	428-3696	3/12	24	Practical Apologetics/Christian Evangel.	??
Paradise Inn	421-1967	3	5A-9P	Commodore 64 Program Files (2.6 MBytes)	C-64
PC Computer Brokers	452-9567	3/12	24	IBM, Epson Equity, TRS-80 Club Mags	IBM
PCjr Net Fido 104/904	789-4610	3/12/24	24	IBM PC Jr. Technical Information / Files	IBM
PCR HUB	1-635-8808	3/12	24	Online Novel - Not Bad!	IBM
Phone Connection	426-7969	3/12	nights	Commodore	C-64
Photo Tech BBS	781-1079	3/12	24	TRS 80/ HAM/Video/Camera	TRS
Pinecliffe Fido 104/28	444-7073	3/12/24	24	125 Meg - Online Order for CDB Systems	IBM
Pirates Cove	798-1207	3/12	24	Apple BBS with Pirate Theme	Apple
Playhouse	286-7399	3/12	24	Adult BBS/Jokes	Apple
PPCompas	1-591-1453	3/12	24	INFO NEEDED	??

DENVER PC BOARDWATCH

LIST OF ELECTRONIC BULLETIN BOARD SYSTEMS

TITLE	TELEPHONE	BPS	HOURS	DESCRIPTION	TYPE
Professional System, The	740-2223	3/12	24	Writers, Lawyers, EDP Auditors	IBM
Prom Blaster	422-3759	3	24	Apple Conversation	Apple
Property Owners Marketing Sys.	973-0100	3/12	24	Real Estate - Poorly done and hostile	IBM
PSINet	985-2634	3	24	Parapsychology/Near Death Exper./Bibliog	TRS
QBBS Central Fido 104/24	423-3114	12	24	QBBS BBS Software Beta Test	IBM
RAM Board, The	449-8421	3/12/24	24	Chess/Tradwars Games. 50+Mbytes Dnlds.	IBM
Ramnet	1-598-7667	3	??	Rampart High School	??
Reggae Land	690-8144	3	10P-6A	Commodore	C-64
Regimental Headquarters	375-9556	3/12	24	Commodore - Military Theme	C-128
Revelstone	722-5806	3/12	5P-2A	INFO NEEDED	??
Roach Motel	697-1225	3 7E2	24	Commodore	C-128
Roc Haven	789-3230	3/12	10P-6A	Atari/Commodore	Atari
Rocky Mountain 99ers	288-3692	3/12	??	RM99ers Club Board Texas Instruments 99	??
Rocky Mountain RBBS	750-2107	3/12	??	INFO NEEDED	??
Ron and Shannons AMIS	978-0298	3/12	24	Atari Support 5.4 Megs	Atari
Running Board	252-4051	3/12	24	Transportation/Atari	Atari
Sanitarium	750-0563	3/12	??	Commodore	??
Sensoria II	762-0669	3	24	Apple II RP Games	Apple
Shaman Exchange	969-8585	3/12	??	Multiline System	Apple
Shamus ST	1-591-8673	3/12	24	INFO NEEDED	??
Sheridan & Associates	935-1489	3/12	24	Buy/Sell/Trade - Chess History	Apple
Skyline Computers	457-0320	3/12	24	Atari Messages	Atari
Smart-Net	1-578-9406	3/12	24	Dungeons/Dragons Games	??
SMMUG	1-598-0111	3/12	24	Macintosh	??
Softronics	1-593-9530	3	24	Private Software Support	??
Solid Software Fido 128/15	1-591-4273	3/12/24	24	Zenith 50 Meg	IBM
Sort Support	699-8222	3/12	??	INFO NEEDED	??
Space Network	494-8446	3/12/24	24	Space Exploration Information	IBM
Spam Mania	423-0348	3/12	??	INFO NEEDED	??
Springs Net	1-634-6077	3/12	7P-11P	INFO NEEDED	??
Stampede	799-9733	3/12/24	6P-10A	Atari/Amiga Messages/Downloads	Atari
Superguild 64	1-473-5739	3/12	24	Commodore	C-64
TAC Headquarters	322-8337	3/12	24	Commodore	C-64
Taj Mahal	451-7222	3/12/24	24	20 Mbytes Apple	Apple
TBBS Net Fido 104/23	699-9248	3/12/24	24	T)he B)read B)oard S)ystem Support	IBM
TBBS#1 of Denver	792-2032	3/12	24	Apparat Computer BBS	??
Telenet	337-6000	3/12	??	INFO NEEDED	??
Temple of Doom	771-9523	3/12	??	IFO NEEDED	??
The 8th Sea Fido 104/610	252-9235	3/12/24	24	Scuba and Rescue Messages / Wiccan	IBM
The Vine	1-596-1216	3/12	24	Religious	??
This End Up Fido 104/30	430-1585	3/12	10P-10A	New Board - dBase - Utils	IBM
Toadscape, The	741-5863	12	24	Atari ST Messages/Downloads	Atari
Top O' the Rockies BBS	1-963-3688	3/12/24	24	Ski Info / Solar / Music Tapes / CDs	TI
Trekker World	745-9530	3	7A-10P	Star Trek Fanzine	Apple
Unknown TBBS	988-8155	3/12	24	BBS Lists, Jokes, Amigas	CP/M
Vern's Terminal Exchange	433-1150	3/12	24	Commodore Messages/Downloads/Ads	C-64
Villa TI	1-574-2567	3/12	24	Front Range 99er Computer Club	TI
Vineyard	989-6609	3 7E2	24	Commodore	C-64
Waterton Computer Club	977-7995	3/12/24	5P-7A	Martin Marietta Employees - 30M Dnlds	IBM
Werdna's Lair II	331-9276	3/12	24	Games	Apple
White Runes of Tinuviel	972-8566	3/12	24	Tolkien Subjects/Dungeons and Dragons	Atari
World Peace	320-4822	3/12/24	24	Current Events, Politics	Heath
ZAP!	367-4103	3/12	??	Atari ST/8 Bit	Atari

Denver PC Boardwatch
5970 South Vivian Street
Littleton, CO 80127

TO: [redacted]

You can have the most timely, accurate, and specific information available concerning the Denver area electronic village delivered directly to your home 12 times each year. Put your modem and PC to work and put yourself in contact with the Denver area telecomputing community. To enter your subscription to Denver PC Boardwatch, send $24.00 check or money order to:

Denver PC Boardwatch
5970 South Vivian Street
Littleton, CO 80127

Name: _____

Address: _____

City: _____ State: _____ Zip: _____